AMENDMENTS TO THE CLAIMS

For the convenience of the Examiner, all claims have been presented whether or not an amendment has been made.

1. **(Currently Amended)** An apparatus ~~comprising~~ comprising:

an aircraft operable to roll; and

a heat exchanger operable to perform heat exchange for the aircraft, the heat exchanger including: ~~which includes:~~

a conduit having spaced first and second portions~~, each portion being~~ and a thermally conductive portion disposed therebetween, said second portion being vertically lower than said first portion;

a supply section for supplying to said first portion of said conduit a fluid coolant, at least a portion of the coolant being in a vapor state, and at least a portion of the coolant flowing from said first portion of said conduit through said thermally conductive portion thereof to said second portion thereof;

thermally conductive structure having a portion which is thermally coupled to ~~each~~ said thermally conductive portion of said conduit for receiving heat from coolant in ~~each~~ said thermally conductive portion of said conduit, so that coolant in a vapor state is cooled and changes to a liquid state;

~~first and second~~ a plurality of valves which each have an inlet and an outlet, said inlets of said valves ~~being physically spaced~~ are offset from each other so that at least one of said inlets is vertically lower than at least one other inlet of said inlets throughout all angles of a roll of the aircraft;

fluid communication structure providing fluid communication between said inlet of each said valve and said second portion of said conduit;

valve control structure responsive to the presence of coolant in a liquid state at the inlet to either said valve for opening that valve; and

a discharge section communicating with said outlet of each said valve.

2. **(Currently Amended)** An apparatus according to Claim 1, wherein said heat exchanger includes a ~~plurality of~~ further conduit ~~conduits~~ having spaced first and second portions~~, each portion being~~ and a thermally conductive portion disposed therebetween, said

second portion of ~~each~~ said further conduit being vertically lower than said first portion thereof; ~~thereof, said plurality of further conduits being spaced from each other in a further axial direction, said plurality of further conduits extending approximately transversely to the axial direction;~~

wherein said supply section supplies the coolant to said first portion of ~~each~~ said further conduit, at least a portion of the coolant flowing from said first portion of ~~each~~ said further conduit through said thermally conductive portion thereof to said second portion thereof; and

wherein said thermally conductive structure has a further portion which is thermally coupled to ~~each~~ said thermally conductive portion of ~~each~~ said further conduit for receiving heat from coolant in ~~each~~ said thermally conductive portion of ~~each~~ said further ~~conduit;~~ conduit.

3. **(Previously Cancelled)**

4. **(Currently Amended)** An apparatus according to ~~Claim 2~~ Claim 20, wherein said supply section includes first, second and third sections, said first section supplying coolant to said second section, said second section supplying coolant to said third section, said third section supplying coolant to said first portions each of the ~~plurality of~~ said conduits which each have said second portion thereof in fluid communication ~~with one~~ said fluid communication structure.

5. **(Previously Cancelled)**

6. **(Currently Amended)** An apparatus according to ~~Claim 4~~ Claim 20, wherein ~~each~~ said fluid communication structure includes a plurality of collection conduits which each communicate with the inlet of ~~a respective said valve~~ at least one of said plurality of valves, said collection conduits offset from each other so that at least one of said collection conduits is vertically lower than at least one other collection conduit of said collection conduits throughout every angle of a roll performed by the aircraft. ~~said second portion of each said conduit communicating with each said collection conduit at respective locations along said second portion which are spaced from each other at predetermined positions.~~

7. **(Currently Amended)** An apparatus according to ~~Claim 2~~ Claim 20, further including an elongate housing which extends approximately in said further axial direction, and which has said heat exchanger therein.

8. **(Currently Amended)** An apparatus according to ~~Claim 2~~ Claim 20, wherein said portions of said thermally conductive structure each include a plurality of spaced fins.

9. **(Withdrawn)** An apparatus according to Claim 8, wherein said heat exchanger includes vanes which are supported on said conduits and configured to cause air flowing approximately in said further direction to be redirected to flow past said fins approximately perpendicular to said further direction and to then be redirected again so as to flow approximately in said further direction.

10. **(Canceled)**

11. **(Canceled)**

12. **(Canceled)**

13. **(Canceled)**

14. **(Canceled)**

15. **(Canceled)**

16. **(Canceled)**

17. **(Canceled)**

18. **(Canceled)**

19. **(Canceled)**

20. **(New)** An apparatus according to Claim 2,

wherein said heat exchanger further includes two additional conduits which each have spaced first and second portions and a thermally conductive portion disposed therebetween, said second portion of each said additional conduit being vertically lower than said first portion thereof, and said supply section supplying coolant to said first portion of each said additional conduit, at least a portion of the coolant flowing from said first portion of each said additional conduit through said thermally conductive portion thereof to said second portion thereof;

wherein said additional conduits are coupled to each other and further coupled to at least one of said conduit and said further conduit;

wherein said thermally conductive structure has two additional portions which are each thermally coupled to said thermally conductive portion of a respective said additional conduit for receiving heat from coolant in said thermally conductive portion thereof; and

wherein each said fluid communication structure is in fluid communication with said second portion of a respective said additional conduit.

21. **(New)** An apparatus according to Claim 6,

wherein said heat exchanger is formed into a plurality of sets, each set including each of said conduits, and each set spaced from each other in an axial direction.

22. **(New)** An apparatus according to Claim 21,

wherein each of the plurality of sets comprises one or more circular shaped conduits, each circular shaped conduit including each of said conduits.

23. **(New)** An apparatus according to Claim 21,

wherein each of the plurality of sets includes one said fluid communication structure.